REMARKS

As a result of the Examiner's previously-issued election/restriction requirement and Applicants' corresponding election of Group I, claims 1-5 are currently pending in this application.

The Claims Are Patentable Over the Cited References.

Claims 1-3 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,517,603 to Kelley, et al. ("Kelley") in view of U.S. Patent No. 6,525,737 to Duluk, Jr. ("Duluk"). The Applicants respectfully traverse.

Claim 1 recites:

> A method for synchronizing parallel texture pipelines, comprising:
>
> loading an array of state variables **for a polygon** into an accumulation portion of a plurality of parallel texture pipelines; and then
>
> simultaneously **enabling a processing portion of a number of the parallel texture pipelines**, said number corresponding to a number of parallel texture operations indicated by the loaded array of state variables, **each of said enabled processing portions to perform one of the number of parallel texture operations for the polygon.**

In the Office Action, the Examiner explained that the combination of *Kelley* and *Duluk* renders the claimed invention obvious because, in part, *Kelley* discloses a rendering device, comprising:

> Synchronizing parallel texture pipelines; simultaneously enabling a processing portion of a number of the parallel texture pipelines, said number corresponding to a number of parallel texture operations indicated by the state variables (lines 47-65 of column 10, lines 5-66 of column 11, and line 5 of column 37 to line 58 of column 38 and Fig. 6-7; token corresponds to state variables. Also, it is noted that the number of processing pipelines (in the example, it could be 1 or 2) will depend on if control token is received. While claim recites texture operation, the term is broad enough to include the pixel shading functions). (*See* Office Action, p. 3.)

However, *Kelley* appears to describe a method of decomposing graphics objects into physical scanline components and then rendering those scanline components in parallel. (*See generally*, Kelley at 37:7-38:58.) The present invention is not concerned with physical display

components such as scanlines. Instead, the present invention, as defined by claim 1, performs a number of texture operations in parallel on a polygon. *Kelley* describes no such feature. For at least this reason, *Kelley's* parallel pipelines fail to disclose parallel processing of multiple texture maps for a polygon.

The Examiner's comment that "the term ['texture'] is broad enough to include the pixel shading functions" is inapposite. The fact that *Kelley* might disclose pixel shading in scanlines says nothing to teach or suggest parallel processing of texture maps for a polygon. *Kelley* does not disclose texture map processing, and *Kelley* certainly fails to disclose texture map processing where different parallel processors perform a different texture operation on the same polygon in parallel. Indeed, an important difference between *Kelley* and the present invention is the nature of the process being "parallelized." In *Kelley*, the parallel operation is rendering a portion of an object to a scanline for display purposes. But in the present invention, the parallel operation is applying multiple texture maps to a polygon. *Kelley* fails to teach or suggest this feature. Thus the Examiner's reliance on *Kelley* to describe this feature is unjustified and should be withdrawn.

The Examiner's reliance on *Duluk* does nothing to address the deficiencies of *Kelley*. Indeed, the two references teach away from each other, because as *Kelley* explains, "[g]enerally, there are two known approaches to providing high performance generation of 3-D images. A first approach focuses on rapidly drawing the graphical objects that comprise the 3-D graphics image. ... A second approach looks to processing the graphical objects with respect to the scanlines on which they would appear on a display." (Kelley at 1:31-39.) *Duluk* follows the first approach while *Kelley* follows the second. For at least this reason, one skilled in the art would not be motivated to combine the two references and thus claims 1-3 are patentable and should be allowed.

Claim 4 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over *Kelley* and *Duluk* in further view of U.S. Patent No. 6,329,996 to Bowen, et al. ("Bowen"). *Bowen* also fails to address the deficiencies of *Kelley* and thus Applicants respectfully traverse this rejection for the same reasons as described above with respect to the limitations of *Kelley*.

Claim 5 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over *Kelley*, *Duluk* and *Bowen* in further view of U.S. Patent No. 6,243,817 to Melo, et al. ("Melo"). For the

same reasons as described above with respect to the limitations of *Kelley*, *Melo* also fails to address the deficiencies of *Kelley* and thus Applicants respectfully traverse this rejection as well.

Conclusion

In view of the above amendments and remarks, the Applicants respectfully submit that the present application is now in condition for allowance. A timely Notice to that effect is earnestly solicited. The Examiner is invited to contact the undersigned at (202) 220-4200 to discuss any aspect of the application.

Respectfully submitted,

KENYON & KENYON

Date: Dec. 29, 2004
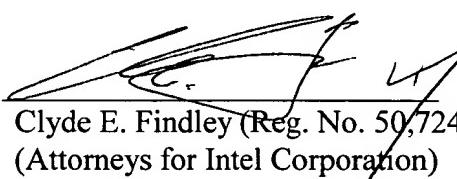
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